BEYOND BOOM AND BUST: NEW LEADERSHIP PARADIGM TO MANAGE RISKS OF COMMODITY CYCLES
(Keep Calm and Carry On—In a Mindful Way)

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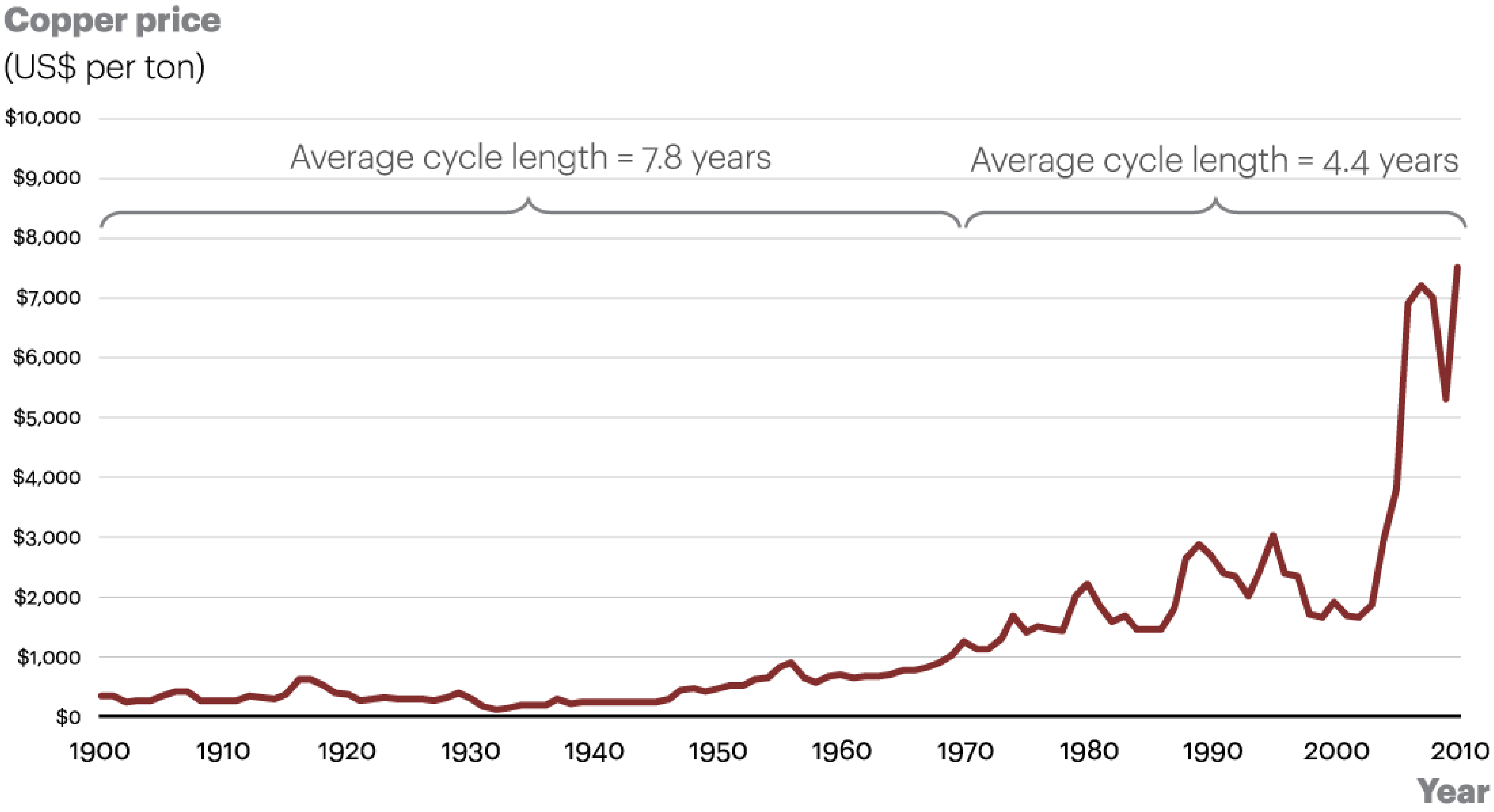
Copper Cycles Over the Past Century

“ Keep calm & carry on” A.T. Kearney*

*Capturing Value from Copper Industry Cycles - 2012

Figure 2

The copper industry’s cycles of peaks and valleys have grown shorter over the past century



Sources: ICSG Yearbook 2011, London Metal Exchange; A.T. Kearney analysis

Introduction

- Mining companies are affected by commodity cycles (Slide 2) and agonize during recessions.

- The challenge is to diminish the volatility and painful consequences of recession.

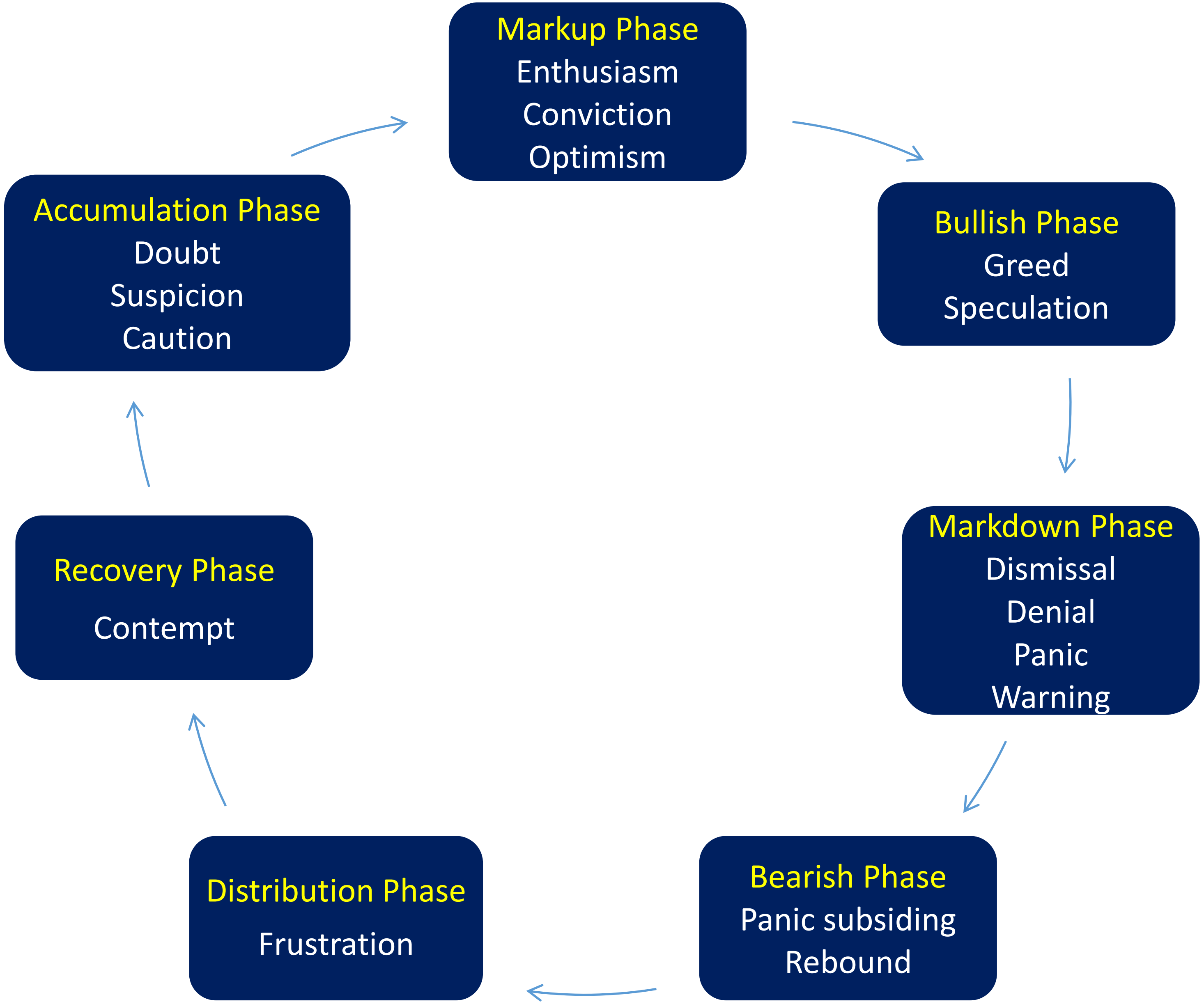
- The objective is to present a two-pronged approach to alleviate the situation.

- The presentation consists of the following three segments:

  1. Situation Analysis: Understanding the Root Causes.
  2. Mitigation Measures: Changes Required to Decision-Making Tools.
  3. Leadership Challenges: Managing the Cycle.

Stages of Commodity Cycle

(Adapted from: Way 2 Capital)



Phases of Price Cycle (Slide 4)

- Heightened economic activities due to an increased demand, tightening of supplies, and rising prices.

- **Markup phase:** Increased profits, plans for expansion to satisfy the growing demand.

- **Bullish phase:** Growing confidence, market pressure to drive stock prices higher.
  - ➢ Results: Over-leveraging and escalation of the all-inclusive costs (AIC)

- **Panic phase:** When reversal occurs, companies are squeezed between falling prices and rising costs, resorting to drastic cost-cutting to get into survival mode.

- **Recovery phase:** Market gradually recovers and becomes balanced, until looming shortages pave the way for renewed expansion.

Challenges of Boom Period

- Problems during recession usually originate in boom period.
- Bull market generates windfall profits due to rising prices, resulting in a rush for expansion.
- Management takes hasty actions to please investors and also reap rewards for themselves.
- Costs rapidly escalate to unsustainable levels before recession strikes.
- Caught off-guard, companies resort to severe pruning to survive.

Analysis of root causes

- Behaviours during boom times have not changed during last 100+ years.

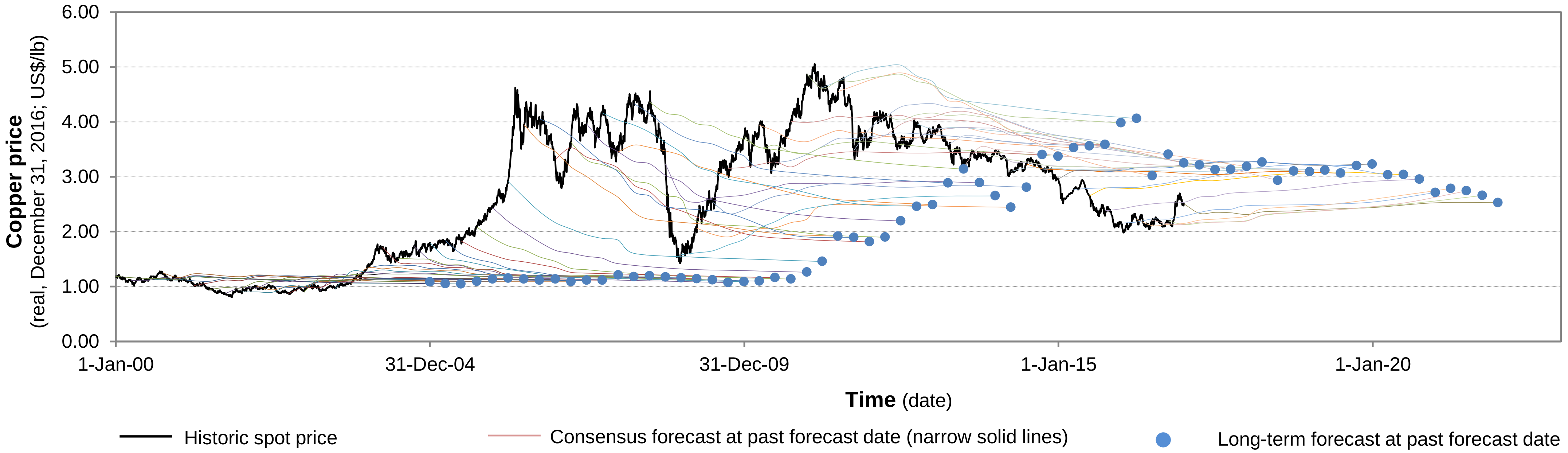
- Companies are unable to resist investors' pressure to deliver bigger payouts.

- Escalation of costs despite utilizing sophisticated financial tools to evaluate major expenditures.

- Main reasons are as follows:
  - Lax financial controls because of the pressure.
  - Current tools have limited capabilities.
  - Price forecasts are never correct and encourage excessive leveraging (Slide 8, Ref. Strategic Capital Management by Michael Samis)

Recognizing forecasting uncertainty

(Ref: Strategic Capital Management by Michael Samis)



Long-term copper forecasts from consensus forecasts

Source: Consensus Economics; Reuters; EY analysis

Adopting new decision making tools

- Current "point-in-time" (PIT) financial models are based on long-term (LT) price forecasts made during boom time.

- Models are linear and do not consider effects of recession.

- This will be mitigated with the following appropriate strategies:
  - ➢ Since future cannot be predicted, controlling the AIC will be more effective.
  - ➢ The "through-the-cycle" (TTC) methodology will track cumulative effects of all activities on AIC.

- For a commodity, AIC is the principal metric, and the position on the cost curve is more critical than the modeling of cash flow based on LT prices.

Using cost curves to manage expenditures

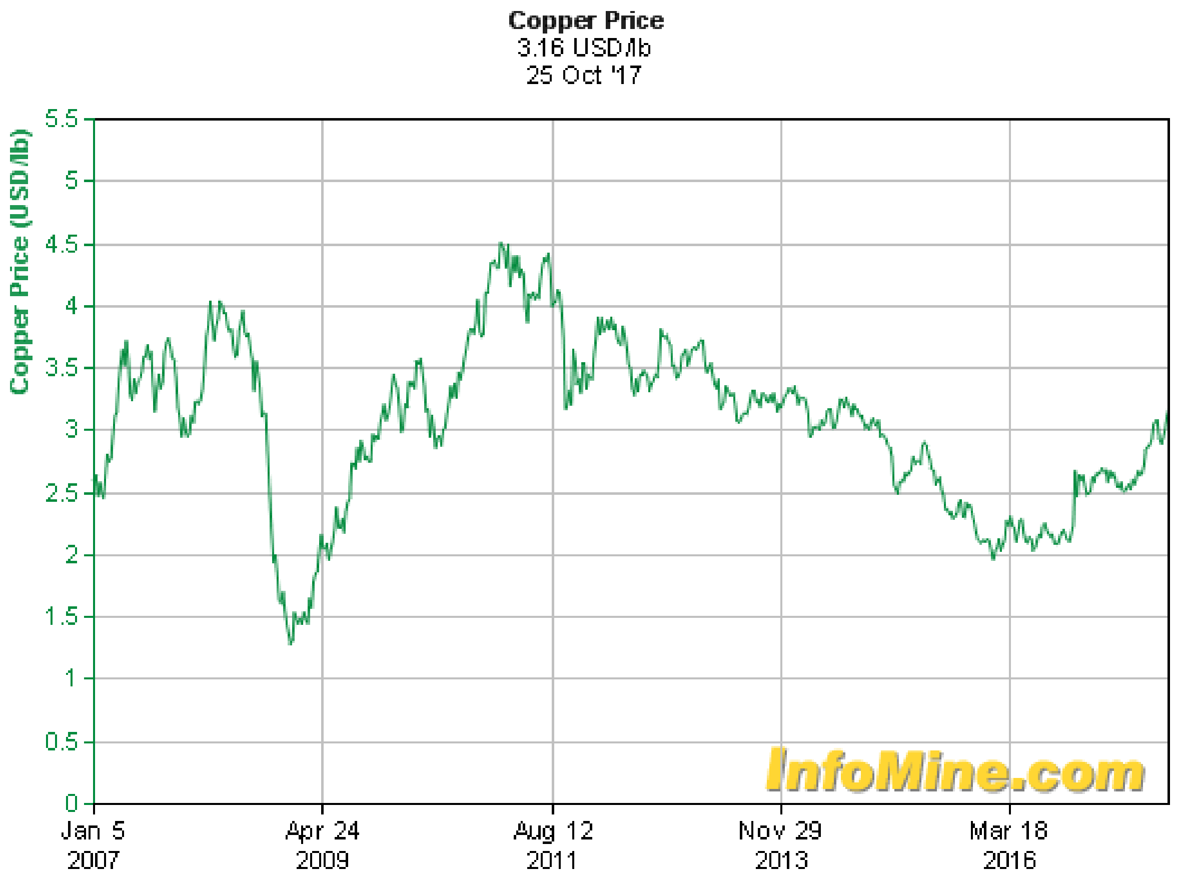
- A position at the left side in the second quartile should ensure a positive cash flow even during the bottom of the cycle.

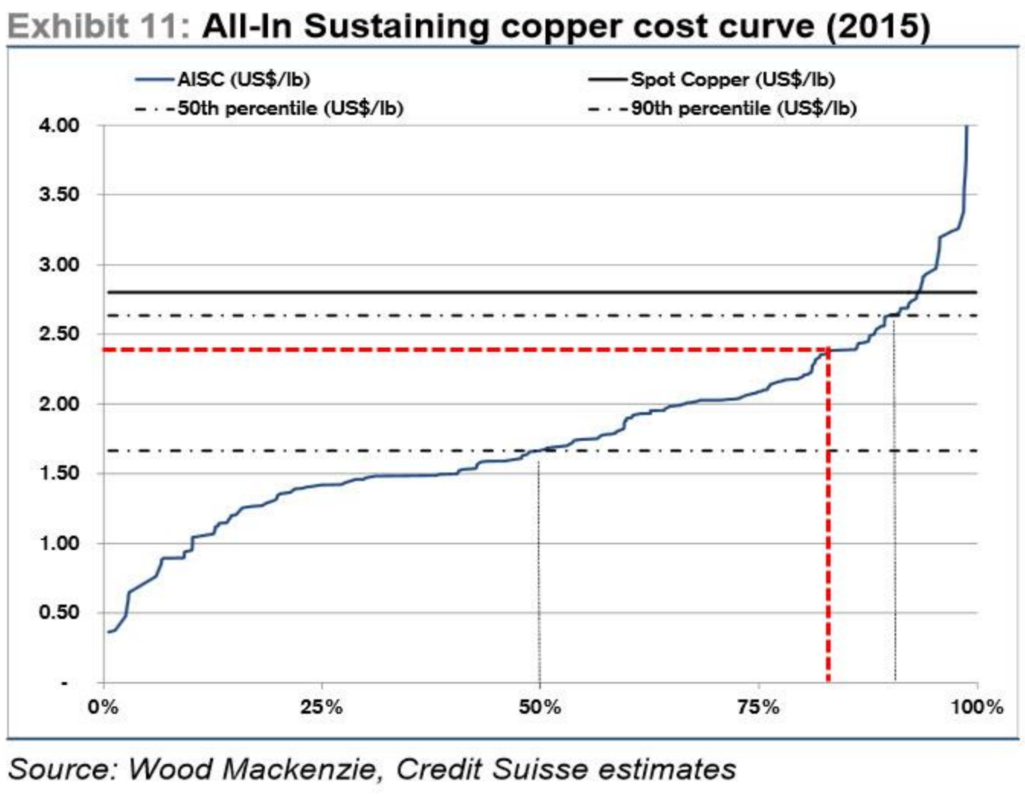
- Referring to Slide 11 involving copper, a 10-year price curve shows that copper prices had a floor of $2.00/lb.

- AIC around $1.50 should ensure a cash-positive operation during recessions.

- Maintaining the desired position will require controlling of expenditures and reduction of costs by continuous improvement (CI) initiatives.

Copper price chart & cost curve





Embracing a New Paradigm

- This is contrary to market's push for expansions during boom by excessive leveraging.

- Limiting expansions during boom will build cash reserves before recession.

- Cash would allow taking advantage of opportunities during recession, when other companies are retrenching.

- The urge to satisfy investors should be countered by adopting:
  - A reward system based on longer-term performance.
  - Leadership traits that allow one to keep calm and remain composed.

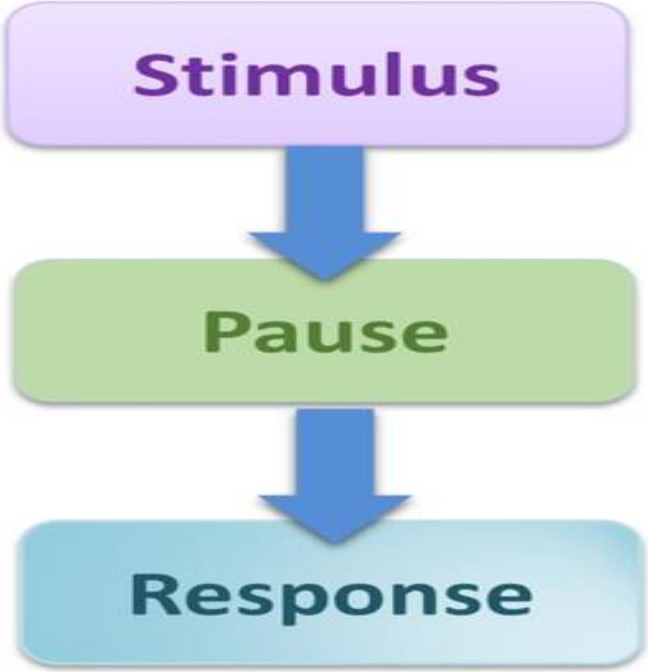
- Neuroscientists are increasingly recommending a behavioral model called "mindfulness," developed more than 2500 years ago (Slide 13).

Mindful Behavior

Being mindful creates space to pause…
Replacing impulsive reactions with thoughtful responses.

Autopilot/Reactive Behavior

Mindful Behavior



Keep calm & carry on in a mindful way!

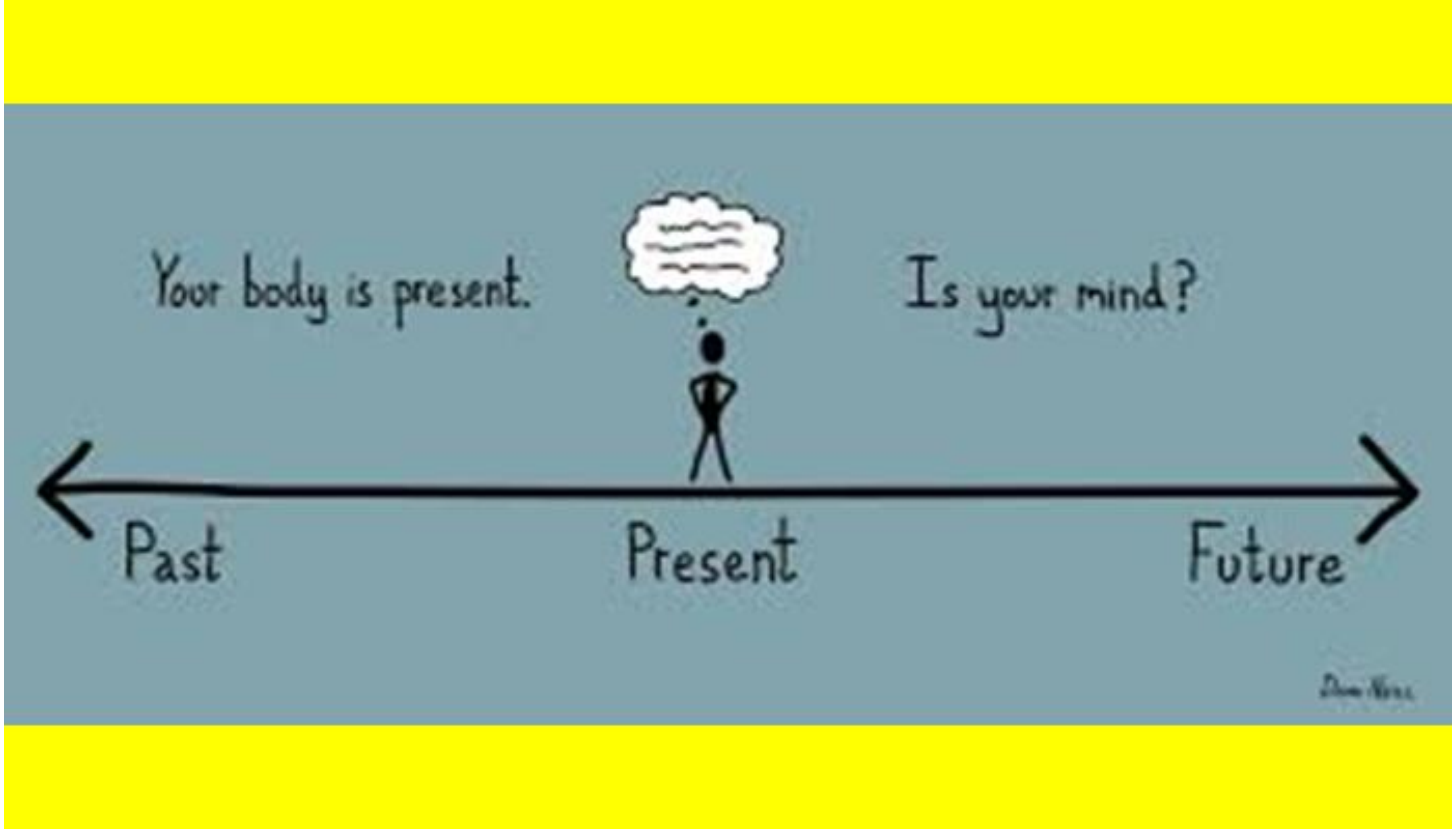
- Calmness is achieved by harnessing the awareness that arises through paying attention, on purpose, in the present moment, rather than going over the past or imagining the future.

- In the mining context, companies should manage their current costs, which they can control, and not trying to predict the future.

- Mindfulness is a mind-training discipline of practicing concentration to manage diversions and anxieties. Refer to Slide 15.

- Mindful management has a proven track record of success, as shown in Slide 16.

Normal state of mind



Mindfulness is everywhere.

Rewarding the New Paradigm

- The two-prong strategy should enable companies to deliver consistent performance in spite of price volatilities.

- The market's support is needed for the change, to encourage companies to be prepared for recession.

- All market participants should be encultured to value prudence during booms, instead of advising on how to manage the aftermaths.

- Finally, this cultural change will attract long-term value investors to support stability.

Conclusions: Four Traits to Remember

1. Mining companies are constantly subjected to fluctuating prices in commodity cycles, over which they have no control.

2. AIC should always be lower than market prices, which are unpredictable, by maintaining a lower position on the cost curve

3. AIC have a natural tendency to escalate unless companies have systems to contain them.

4. This will be achieved by following the two-pronged strategy and focusing on CI initiatives.

Following these principles will

satisfy stakeholders,

gain happy customers,

and delight shareholders.

THANK YOU, ANY QUESTIONS?